



# Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

February 9, 2000

Ms. Joyce Collins  
U.S. Fish and Wildlife Service  
RR 3, Box 328  
Marion, Illinois 62959

RE: FA 999  
New Mississippi River Crossing  
Job # P-98-088-91  
Madison and St. Clair Counties

FAP 14 (IL 3) and Addenda  
Job # P-98-082-90  
Section (64, 510) - 1  
Sauget to Venice  
Madison and St. Clair Counties

Dear Ms. Collins:

In compliance with Section 7 (c) of the Endangered Species Act of 1973, as amended, enclosed is the Biological Assessment of the above proposed projects on the endangered and threatened species found or likely to be found in the project area.

Please respond with your Biological Opinion. If you have any questions, please contact Richard J. Nowack of the Bureau of Design and Environment at 217/785-2943. Thank you for your assistance in this matter.

Very truly yours,

William T. Sunley  
Engineer of Design and Environment

A handwritten signature in cursive script that reads "Bill Sunley".

By: Peter J. Frantz  
Chief of Environment

Attachment

Cc: Steve Hamer (IDNR)  
J. Easterly (IDOT District 8)  
Ronald C. Marshall (FHWA) ATTN: Jon-Paul Kohler

SED



# Illinois Department of Transportation

2300 South Dirksen Parkway / Springfield, Illinois / 62764

February 9, 2000

Mr. Steve Hamer  
Program Manager, Transportation Review  
Division of Natural Resource Review and Coordination  
Illinois Department of Natural Resources  
524 South Second Street  
Springfield, Illinois 62701-1787

RE: FA 999  
New Mississippi River Crossing  
Job # P-98-088-91  
Madison and St. Clair Counties

FAP 14 (IL 3) and Addenda  
Job # P-98-082-90  
Section (64, 510) - 1  
Sauget to Venice  
Madison and St. Clair Counties

Dear Mr. Hamer:

In compliance with Section 11 of the Illinois Endangered Species Protection Act (520 ILCS 10/1, et seq), enclosed is the Biological Assessment of the above proposed projects on the state and federal endangered and threatened species found or likely to be found in the project area.

Please respond with your Biological Opinion. If you have any questions, please contact Richard J. Nowack of the Bureau of Design and Environment at 217/785-2943. Thank you for your assistance in this matter.

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Engineer of Design and Environment

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Attachment

Cc: Joyce Collins (USFWS)  
J. Easterly (IDOT District 8)  
Ronald C. Marshall (FHWA) ATTN: Jon-Paul Kohler

SED

# **Biological Assessment**

**Proposed New Mississippi River Bridge (FA 999)  
Proposed IL Route 3**

**St. Clair and Madison Counties**

**Prepared by the Illinois Department of Transportation  
February 2000**

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# Biological Assessment

## I. Description of the Proposed Action

### 1. Introduction

In compliance with Section 7(c) of the Endangered Species Act of 1973, as amended, the Federal Highway Administration and the Illinois Department of Transportation (IDOT) are required to conduct a biological assessment of any federal threatened or endangered species likely to be affected by the proposed action. The proposed actions in this case are the new Mississippi River Crossing (FA 999) from I-55/70 in St. Clair County, Illinois, to 14th Street in St. Louis, Missouri. The next project is Illinois Route 3 which is located along the Mississippi River and is bounded by Monsanto Avenue in Sauget on the south, the Mississippi River levee on the west, Eighth Street and the conglomerate of railroad tracks running north and south on the east, and Broadway Avenue in Venice on the north. The corridor is located in the former floodplain of the Mississippi River, now levee protected. This area had been used for industrial and railroad operations in the past, and is currently primarily composed of vacant land.

### 2. Purpose of the Development of a new Mississippi River Crossing (FA 999)

The purpose of the development of a new Mississippi River Crossing (FA 999) is to respond to growing peak-period traffic congestion across the river in the downtown St. Louis area. In addition, the preferred alignment for the new river bridge has been selected by the Executive Committee on the north side of downtown St. Louis. The Executive Committee of the Mississippi River Crossing Study is made up of Illinois' Secretary of Transportation, Missouri's Chief Engineer, a representative from the Southwestern Illinois Leadership Council, and the executive director of the St. Louis Regional Commerce & Growth Association. This decision reflects the input of the local community and the input of a Study Management Group and the results of technical studies (Transportation News, 1996).

### 3. Purpose of the proposed Illinois Route 3 Project

The purpose of the proposed Illinois Route 3 project is to construct a multi-lane highway at a new location to replace the current outmoded highway. Illinois Route 3 begins at the southern tip of the state in Cairo and terminates in Grafton. Within the greater metropolitan St. Louis area, Route 3 is a four-lane highway from Waterloo to its

northern terminus, except for the portion within the study corridor. Various plans for improving the route within the study corridor have been suggested since the mid-1950s.

In East St. Louis, Route 3 is also marked as I-55/64/70. It contributes 7,000 vehicles per day to the interstate highway between the intersection of Route 3 with the interstate highway, at Sauget and the St. Clair Avenue interchange. North of East St. Louis, Route 3 is a deteriorated two-lane highway which crosses multiple railroad tracks in National City, Brooklyn and Venice, and contains many sharp, low speed curves.

#### **4. Purpose of Document**

The purpose of this document is to present results and to assess the potential of significant impacts on federal and state endangered and threatened species within the FA 999 New Mississippi River Bridge and IL Route 3 project corridors.

#### **5. New Mississippi River Crossing (FA 999) proposed Action Summary**

The proposed action is the construction of a new Mississippi River Crossing from I-55/70 in St. Clair County, Illinois to 14th Street in St. Louis, Missouri. The project length is 8.05 km (5.00 miles) and will be on new right-of-way. (Barbara Stevens, IDOT Central office project coordinator, contacted District 8 on 26 August 1999 to determine the amount of new right-of-way for the project corridor). The amount of right-of-way will be determined at a later time. Construction may begin as early as 2004 depending on many factors such as land acquisition and project funding.

#### **6. Illinois Route 3 proposed Action Summary**

The proposed Illinois Route 3 project consists of the construction of a multi-lane highway at a new location to replace the current outmoded highway. It will be classified as an urban major arterial with a 50-MPH design speed. Its purpose is to provide continuity for Route 3 separate from the interstate system, and to open lands within the corridor to development which is vital to East St. Louis and neighboring communities. Traffic projections indicate that at least 20,000 vehicles per day would use a new highway by the year 2018. The project involves the relocation of Illinois Route 3 on new alignment along the East St. Louis riverfront from Monsanto Avenue in Sauget to Broadway Avenue in Venice. The project length is 8.80 kilometers (5.50 miles) and approximately 25.1 ha (62 acres) of additional right-of-way will be required. Construction may begin as early as 2004 depending on many factors such as land acquisition and project funding.

## II. Description of Borrow Use Areas

### 1. New Mississippi River Crossing (FA 999) project

The estimated borrow acreage for the proposed alignment of the FA 999 project is 1.5 million cubic yards. The locations of where borrow material will be obtained have not been determined. Any potential borrow use areas will be surveyed for the presence of federal and state threatened and endangered species prior to the use of a particular site for borrow.

### 2. IL Route 3 project

The estimated borrow acreage for the realignment of IL Route 3 is 2.17 million cubic yards. The locations of where borrow material will be obtained have not been determined. Any potential borrow use areas will be surveyed for the presence of federal and state threatened and endangered species prior to the use of a particular site for borrow.

## III. Status of the Species Habitat

### 1. New Mississippi River Crossing (FA 999) Study Area

The FA 999 corridor includes sections of the Cahokia Canal, Schoenberger Creek, and the Old Cahokia Creek. The Cahokia Canal and Schoenberger Creek are both essentially drainage ditches. Both are of very low natural quality and it is unlikely that they provide habitat for any plant or animal species of special concern (Ketzner and Keene, 1997). The FA 999 project area consists mainly of developed and agricultural land (Ketzner and Keene, 1999).

The FA 999 New Mississippi River Bridge area consists of fifteen cover types and includes 1519 acres. Cover types within the project corridor are as follows:

Urban/Built-up Land is the dominant cover type and occupies 310 hectares (767 acres) and represents 50.5% of the project corridor. This cover type includes residential, commercial and industrial areas of St. Louis and East St. Louis. This area includes a landfill, a motor raceway, a golf course, a railroad, and highway facilities. The vegetation consists of maintained grasses and/or ornamental trees and shrubs (Perino, 1999).

Forbland occupies 48 hectares (118 acres) and represents 7.8% of the project corridor. This cover type consists of successional fields dominated by disturbance-adopted and disturbance-tolerant forbs (weedy forbs). The dominant species include common ragweed (*Ambrosia artemisiifolia*), giant ragweed (*Ambrosia trifida*), field aster (*Aster pilosus*) and tall goldenrod (*Solidago canadensis*) (Perino, 1999).



The lake cover type occupies 47 hectares (115 acres) and represents 7.6% of the project corridor. This cover type consists of a deep-water habitat situated in a depression. Within the project corridor this type is represented by a landfill lake (Perino, 1999).

The pond cover type occupies 39 hectares (96 acres) and represents 6.3% of the project corridor. This cover type can be natural (meander scars) or artificial. If the ponds are non-maintained, they will support wetland vegetation. All of the ponds within the project area are jurisdictional wetlands (Perino, 1999).

Shrubland occupies 34 hectares (85 acres) and represents 5.6% of the project corridor. This cover type is composed of early successional fields such as vacant land, abandoned urban and industrial land and roadside thickets dominated by shrubs (Perino, 1999).

The river cover type occupies 33 hectares (81 acres) and represents 5.3% of the project corridor. This cover type consists of the Mississippi River (Perino, 1999).

Wet shrubland occupies 60 acres and represents 4.0% of the project corridor. This cover type includes areas dominated by woody vegetation less than 20 feet tall. The species include true shrubs and young trees. These areas are jurisdictional wetlands (Perino, 1999).

Floodplain forest occupies 22 hectares (54 acres) and represents 3.6% of the project corridor. This cover type includes areas dominated by woody vegetation that is over 20 feet tall that occur on floodplains. These areas are jurisdictional wetlands (Perino, 1999).

Wet meadow occupies 19 hectares (48 acres) and represents 3.2% of the project corridor. This cover type includes areas that are dominated by grasses where the soils are hydric. These are jurisdictional wetlands (Perino, 1999).

Cropland occupies 18 hectares (45 acres) and represents 3.0% of the project corridor. This cover type includes agricultural fields that are planted in corn and soybeans. This area also includes temporarily fallow fields (Perino, 1999).

Forest occupies 8 hectares (21 acres) and represents 1.4% of the project corridor. This cover type includes areas dominated by trees that are not normally flooded by stream overflow. These areas are not jurisdictional wetlands (Perino, 1999).

The stream cover type occupies 5 hectares (13 acres) and represents 0.9% of the project corridor. This cover type includes deep-water habitat confined to a channel. The channel should periodically or continuously contain moving water. In the project area, this cover type includes the Cahokia Canal, the Cahokia Creek, and the Lansdowne Ditch (Perino, 1999).

Non-native grassland occupies 5 hectares (12 acres) and represents 0.8% of the project corridor. This cover type includes open land dominated by cool season grasses, especially awnless brome grass (*Bromus inermis*), Kentucky bluegrass (*Poa pratensis*) and meadow fescue (*Festuca pratensis*). Mowed roadsides are not mapped under this cover type (Perino, 1999).

Marsh occupies 0.8 hectares (2 acres) and represents 0.1% of the project corridor. This cover type includes areas dominated by tall graminoid plants that have water near or above the surface for most of the year. These areas are jurisdictional wetlands (Perino, 1999).

Farmed wetlands occupy 0.8 hectares (2 acres) and represents 0.1% of the project corridor. These areas are cropland that have been mapped by the Natural Resource Conservation Service (NRCS) as "farmed wetlands" (Perino, 1999).

In addition to cover type information, a wetland survey was conducted on 3, 4, and 5 June and 7 August 1997 for the addendum #1 to the New Mississippi River Bridge Crossing in Madison and St. Clair Counties, Illinois. All potential wetlands within the project corridor were examined. Nineteen routine onsite wetland determinations were performed. A detailed explanation and a map of the 19 wetland sites can be found in the Wetland Report for FA 999 New Mississippi River Bridge by David Ketzner and Dennis Keene, 1997. Wetland sites within the project corridor for the New Mississippi River Bridge Crossing were summarized as follows:

Site 1 is a wet shrubland located 9.8 meters (32 feet) southeast of Eagle Park Road, northwest of the Cahokia Canal. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This site is a low area between the embankments of Eagle Park Road and the Cahokia Canal. This wetland site is approximately 1.4 hectares (3.4 acres) in size. In addition, this wet shrubland provides floodwater storage and wildlife habitat of fair quality (Ketzner and Keene, 1997).

Site 2 is a wet meadow located 9.1 meters (30 feet) southeast of Eagle Park Road, north of the Cahokia Canal between the railroad tracks. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This site is a low area between the embankments of Eagle Park Road, the Cahokia Canal, and the railroad tracks. This wetland site is approximately 0.8 hectares (2.0 acres) in size and provides floodwater storage and wildlife habitat of fair quality. Several snakes and a few federally and Illinois threatened decurrent false aster, *Boltonia decurrens*, were observed at this site. In addition, the National Wetland Inventory (NWI) codes this site as PEMC (seasonally flooded, emergent, palustrine wetland) (Ketzner and Keene, 1997).

Site 3 is a forbland located 183 meters (600 feet) southeast of Eagle Park Road and 366 meters (1200 feet) west of Schoenberger Creek, south of the Cahokia Canal between the railroad tracks. Dominant hydrophytic vegetation, hydric soils, and wetland hydrology are absent; therefore, this site is not a wetland. However, this forbland provides wildlife habitat of fair quality. In addition, the NWI codes this site as PEMC (seasonally flooded, emergent, palustrine wetland) (Ketzner and Keene, 1997).

Site 4 is a wet meadow located 195 meters (640 feet) southeast of Eagle Park Road and 290 meters (950 feet) west of Schoenberger Creek, south of the Cahokia Canal between the railroad tracks. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This site is a low area between the embankments of the Cahokia Canal and the railroad tracks. This wetland site is approximately 2.1 hectares (5.1 acres) in size and provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PEMC (seasonally flooded, emergent, palustrine wetland). A few individuals of the federally and Illinois threatened decurrent false aster, *Boltonia decurrens*, were observed at this site (Ketzner and Keene, 1997).

Site 5 is a pond located 128 meters (420 feet) southeast of Eagle Park Road and 518 meters (1700 feet) west of Schoenberger Creek, south of the Cahokia Canal. Based on the presence of hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This wetland site is approximately 0.7 hectares (1.7 acres) in size and appears to be excavated. This pond provides floodwater storage and wildlife habitat of fair quality. In addition, the NWI codes this site as PEMCx (excavated, seasonally flooded, emergent, palustrine wetland) (Ketzner and Keene, 1997).

Site 6 is a wet meadow located 128 meters (420 feet) southeast of Eagle Park Road and 585 meters (1920 feet) northeast of State Route 3. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This wetland site is approximately 1.0 hectares (2.4 acres) in size and provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PEMAd (partially drained/ditched, temporarily flooded, emergent, palustrine wetland). In addition, a few federally and Illinois threatened decurrent false aster, *Boltonia decurrens*, occur at this site (Ketzner and Keene, 1997).

Site 7 is a floodplain forest located 299 meters (980 feet) west of State Route 203 and 55 meters (180 feet) north of the Cahokia Canal. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This wetland is approximately 1.9 hectares (4.7 acres) in size and provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PEMF (semi-permanently flooded, emergent, palustrine wetland) (Ketzner and Keene, 1997).

Site 8 is a wet shrubland located 402 meters (1320 feet) west of State Route 203 and 49 meters (160 feet) north of the Cahokia Canal. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This wetland site is approximately 7.7 hectares (19.0 acres) in size and provides floodwater storage and wildlife habitat of fairly good quality. The NWI codes this site as PEMC (seasonally flooded, emergent, palustrine wetland) and PEMF (semi-permanently flooded, emergent, palustrine wetland). In addition, a large population of the federally and Illinois threatened decurrent false aster, *Boltonia decurrens*, occurs at this site (Ketzner and Keene, 1997).

Site 9 is a wet meadow located 18 meters (60 feet) east of State Route 203 and 30 meters (100 feet) south of the Cahokia Canal. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This wetland site is approximately 8.2 hectares (20.3 acres) in size and provides floodwater storage and wildlife habitat of fair quality. Mallard ducks, *Anas platyrhynchos*, and Red-winged Blackbirds, *Agelaius phoeniceus*, were observed at this site. The NWI codes this site as PEMCd (partially drained/ditched, seasonally flooded, emergent, palustrine wetland). A small population of the federally and Illinois threatened decurrent false aster, *Boltonia decurrens*, occurred at this site (Ketzner and Keene, 1997).

Site 10 is a wet meadow located 250 meters (820 feet) southeast of Eagle Park Road and 12 meters (40 feet) north of the Cahokia Canal. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined

that this site is a wetland. This wetland site is approximately 1.3 hectares (3.2 acres) in size and provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PEMC (seasonally flooded, emergent, palustrine wetland) and PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland). A small population of the federally and Illinois threatened decurrent false aster, *Boltonia decurrens*, occurred at this site. This area is part of a newly constructed golf course (Ketzner and Keene, 1997).

Site 11 is a pond located 305 meters (1000 feet) southeast of Eagle Park Road and 30 meters (100 feet) north of the Cahokia Canal. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This site appears to be an old oxbow of the original Cahokia Creek and is approximately 0.8 hectares (1.9 acres) in size. This pond provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PEM/FO1C (seasonally flooded, emergent/broad-leaved deciduous, forested, palustrine wetland). This area is part of a newly constructed golf course (Ketzner and Keene, 1997).

Site 12 is barren land located 366 meters (1200 feet) southeast of Eagle Park Road and 61 meters (200 feet) north of the Cahokia Canal. This site is a newly constructed golf course. It is not known if this site was a wetland prior to construction activities of the golf course. However, it is clear that this site is not presently a wetland. The NWI codes this site as PSS1A (temporarily flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland) (Ketzner and Keene, 1997).

Site 13 is a lake located 30 meters (100 feet) northwest of Interstate Route 55-70 and 671 meters (2200 feet) east of the Gateway International Raceway. This site is permanently inundated at a mean annual water depth of > 2 meters (6.6 feet). This site is a deepwater aquatic habitat. Thus, this site is not a wetland. The lake provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom) and PEMFx (excavated, semi-permanently flooded, emergent, palustrine wetland) (Ketzner and Keene, 1997).

Site 14 is a pond located 37 meters (120 feet) southeast of I 55-70 and 488 meters (1600 feet) west of Old Cahokia Creek. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This excavated site is approximately 8.4 hectares (20.7 acres) in size and provides floodwater storage and wildlife habitat of fairly good quality. Formerly Illinois threatened Double-crested Cormorants, *Phalacrocorax auritus*, were observed at this site. In addition, beaver activity was detected. The NWI codes this site as PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom) (Ketzner and Keene, 1997).

Site 15 is a floodplain forest located 18 meters (60 feet) southeast of I 55-70, north and south of Old Cahokia Creek. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This wetland site is approximately 28.3 hectares (70.0 acres) in size and provides floodwater storage and wildlife habitat of fairly good quality. The NWI codes this site as PFO1A (temporarily flooded, broad-leaved deciduous, forested, palustrine wetland) (Ketzner and Keene, 1997).

Site 16 is a pond located 17 meters (55 feet) northwest of I 55-70, north and south of Old Cahokia Creek. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This excavated site is approximately 29.7 hectares (73.4 acres) in size and provides floodwater storage and wildlife habitat of fairly good quality. The NWI codes this site as PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom) and PEMF (semi-permanently flooded, emergent, palustrine wetland) (Ketzner and Keene, 1997).

Site 17 is a pond that is the old channel of Old Cahokia Creek, located east and west of I 55-70. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. The channel now appears to be blocked off at either end, forming an elongated impoundment approximately 5.2 hectares (12.9 acres) in size. This pond provides floodwater storage and wildlife habitat of fairly good quality. The NWI codes this site as R2UBHx (excavated, permanently flooded, lower perennial, riverine system with an unconsolidated bottom) (Ketzner and Keene, 1997).

Site 18 is a wet shrubland located 17 meters (55 feet) southeast of I 55-70 at the east end of the project corridor. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. The wetland site is approximately 44.6 hectares (110.3 acres) in size and provides floodwater storage and wildlife habitat of fair quality. The NWI codes this site as PEMC (seasonally flooded, emergent, palustrine wetland) (Ketzner and Keene, 1997).

Site 19 is a wet meadow located 15 meters (50 feet) northwest of Eagle Park Road and 701 meters (2300 feet) east of State Route 3. Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This site is part of an agricultural field and is probably plowed yearly. It appears, however, to be too wet to plant in most years. This wetland site is approximately 0.7 hectares (1.7 acres) in size and provides floodwater storage and wildlife habitat of possibly fair quality. The NWI does not recognize this site as a wetland. However, the Natural Resources Conservation Service (NRCS) codes this site as farmed wetland. In addition, a small population of the federally and Illinois threatened decurrent false aster, *Boltonia decurrens*, occurred at this site (Ketzner and Keene, 1997).

In addition to the 19 wetland sites, an old field with very sandy soil (successional field) is present at approximately the location of the proposed highway crossing over the Mississippi River (FA 999, New Mississippi River Crossing, Alternate 2 [Addendum 3]). This field is very degraded and not qualitatively distinct from the prevailing highly degraded landscape. However, some native species are present that occur in sand prairies such as the formerly state endangered (1990) hairy bead grass (*Paspalum bushii*) that was delisted from the Illinois Threatened and Endangered Species List in 1994. This field is characterized mostly by herbaceous vegetation but also has a small grove of submature cottonwood trees. Prior to the development of the adjacent levee bordering the Mississippi River, this area of sandy soil may have been part of a riparian sand-prairie/floodplain forest or savanna complex. However, no undegraded examples

of such a natural community presently exists for comparison. In addition, the Soil Survey of St. Clair County, Illinois maps the area of the sandy field as "urban land". No areas in the project merit consideration as statewide or regionally significant natural areas. The area on the Missouri side of the Mississippi River (St. Louis) is entirely developed and contains no natural vegetation or habitat (Taft, 1998).

All wetlands within the sandy area of the FA 999 project corridor were examined by David Ketzner and Dennis Keene of the Illinois Natural History Survey. This area was sampled independently from the previous 19- wetland sites located within the FA 999 corridor. Four routine on-site wetland determinations were performed and four sites were identified within the sandy area of the FA 999 project corridor. A detailed explanation and a map of the four wetland sites can be found in the Wetland Report for FA 999 New Mississippi River Bridge by David Ketzner and Dennis Keene, 1999. Wetland sites within the sandy field were summarized as follows:

Site 1 is a floodplain forest/marsh/pond located 3 meters (10 feet) east of the Levee Road and 24.4 meters (80 feet) west of the railroad tracks. The NWI codes this site as PSS1Cx (excavated, seasonally flooded, broad-leaved deciduous, scrub-shrub, palustrine wetland) and PUBGx (excavated, intermittently exposed, palustrine wetland with an unconsolidated bottom). This wetland is approximately 10.2 hectares (25.1 acres) in size and is entirely within the project corridor. This site provides floodwater storage and wildlife habitat of fairly good quality. A state endangered Black-crowned Night Heron (*Nycticorax nycticorax*) and several Great Blue Herons (*Ardea herodias*) were observed at this site (Ketzner and Keene, 1999).

Site 2 is a floodplain forest/forbland located 4.6 meters (15 feet) east of the Levee Road and 3 meters (10 feet) west of the railroad tracks. The NWI codes this site as a PEM/SS1A (temporarily flooded, emergent/broad-leaved deciduous, scrub-shrub, palustrine wetland). However, dominant hydrophytic vegetation, hydric soils, and wetland hydrology are absent. Therefore, this site is not a wetland (Ketzner and Keene, 1999).

Site 3 is a floodplain forest located 232 meters (760 feet) east of the Levee Road and 12 meters (40 feet) west of the railroad tracks. The NWI codes this site as a PEM/SS1A (temporarily flooded, emergent/broad-leaved deciduous, scrub-shrub, palustrine wetland). Based on the presence of dominant hydrophytic vegetation, hydric soils, and wetland hydrology, it was determined that this site is a wetland. This wetland is approximately 1.1 hectares (2.8 acres) in size and is entirely within the project corridor. This site provides floodwater storage and wildlife habitat of fairly good quality. A hen turkey (*Meleagris gallopavo*) with a nest was observed at this site (Ketzner and Keene, 1999).

Site 4 is shrubland located 549 meters (1800 feet) east of the Levee Road between the embankments of the railroad tracks. The NWI codes this site as a PEMA (temporarily flooded, emergent, palustrine wetland). Although hydric soils are present, dominant hydrophytic vegetation and wetland hydrology are absent. Therefore, this site is not a wetland. This site is an early successional community with a high percentage of exotic species, indicative of a recent history of disturbance (Ketzner and Keene, 1999).

## 2. Illinois Route 3 project Study Area

The Illinois Route 3 project area consists of thirteen cover types within the 613.5-hectare (1518 acres) roadway corridor. The corridor is approximately 610 meters (2000 feet) in width (Perino, 1998).

Urban and Built-up land is the dominant cover type in the project corridor covering 289 hectares (714 acres) and representing 47.1 percent of the project area. This cover type includes residential, commercial and industrial areas, parks, roadways and railways occurring in East St. Louis, Sauget, National City, Brooklyn and Venice. The vegetation consists of maintained grasses and/or ornamental trees and shrubs (Perino, 1998).

Shrubland occupies 137 hectares (339 acres) and represents 22.3 percent of the project corridor. This community is composed of early successional fields such as vacant lots, abandoned urban and industrial land, and roadside thickets dominated by shrubs with a few young trees and samplings. In addition, many exotics are present; over 40 percent of the species found in this community are not native to Illinois. This community is prevalent where the substrate consists of fill material such as ash and cinders (Perino, 1998).

Non-native grassland occupies 56 hectares (139 acres) and represents 9.2 percent of the project corridor. This community is made up of urban vacant lots, waste areas, abandoned railroads, and highway rights-of-way (Perino, 1998).

Cropland occupies 55 hectares (135 acres) and represents 8.9 percent of the project corridor. This category consists of agricultural fields planted to annual crops such as corn and soybeans. Most of the cropland occurs between Brooklyn and Venice in the northern part of the project area (Perino, 1998).

Forest occupies 24 hectares (61 acres) and represents 4.0 percent of the project corridor. This floodplain forest type occurs on relatively well-drained soils within the historical floodplain of the Mississippi River. This type is not jurisdictional wetland. This community is now protected from flooding of the Mississippi River by a levee. This community is composed of early successional forest on abandoned land or narrow strips of trees along roadsides (Perino, 1998).

Forbland occupies 13 hectares (32 acres) and represents 2.1 percent of the project corridor. The community is made up of urban vacant lots, waste areas and abandoned railyards. Weedy forbs are dominant. Exotic species are common in this highly disturbed early successional community (Perino, 1998).

Wetlands occupy 41 hectares (82 acres) and represent 5.3 percent of the project corridor containing five different cover types. The five wetland cover types are wet meadow, floodplain forest, marsh, wet shrubland and farmed wetland. The various wetland types within the project corridor are as follows:

- The wet meadow cover type occupies 11.00 hectares (27.00 acres) and represents 1.8 percent of the project corridor. It is made up of low spots in successional fields and urban areas. Some of these wet meadows were

probably excavated. These sites have a recent history of disturbance and are in an early successional stage. In some of these wet meadows, the federal and state threatened plant species decurrent false aster (*Boltonia decurrens*) occurs (Perino, 1998).

- The floodplain forest cover type occupies 9.00 hectares (21.00 acres) and represents 1.4 percent of the project corridor. It is similar to the forest cover type but occurs on slightly lower ground and delineate as jurisdictional wetlands. Many of these sites are located in excavated areas. All of these sites are protected from flooding of the Mississippi River by a levee (Perino, 1998).
- The marsh cover type occupies 8.00 hectares (19.00 acres) and represents 1.2 percent of the project corridor. It includes wet areas dominated by tall graminoid plants. Some of these sites were probably excavated long ago (Perino, 1998).
- Wet shrubland cover type occupies 5.00 hectares (13.00 acres) and represents 0.8 percent of the project corridor. It is composed of shrub and sapling dominated areas. The federal and state threatened species decurrent false aster (*Boltonia decurrens*) occurs within the cover type in the northern part of the project area (Perino, 1998).
- Farmed wetland cover type occupies 0.8 hectares (2.0 acres) and represents 0.1 percent of the project corridor. It consists of cropland that has been mapped by the Natural Resource Conservation Service as farmed wetland and therefore, is considered jurisdictional wetland for purposes of Section 404 of the Clean Water Act (Perino, 1998).

The pond cover type occupies 2.0 hectares (6.0 acres) of the project corridor. The pond community consists of relatively shallow, permanently inundated, excavated or natural meander ponds. Vegetation is largely confined to a narrow strip around the periphery. This narrow strip is composed of such hydrophytic vegetation as eastern cottonwood and peach-tree willow (Perino, 1998).

The stream cover type occupies 0.7 hectares (2.0 acres) of the project corridor. The stream community consists of the Cahokia Canal. The canal is approximately 30 feet wide and less than 8 feet deep (Perino, 1998).

Based on the floristic composition of the plant communities within the Illinois Route 3 project corridor, it was determined that the cover types were of poor to fair natural quality. In all of the cover types exotics (non-native plant species) were commonly encountered. Thirty-five percent or more of the species composition in some of these communities (shrubland, forbland, non-native grassland) contain plants not native to Illinois. In addition, many of the soils in the corridor have been so altered by cuts and fills that all of the communities would be considered early successional (Perino, 1998).



#### IV. Analysis of Federally Threatened and Endangered Species within the Proposed Area

A number of endangered and threatened species occur within the project corridor. The Federally and State Threatened plant species, decurrent false aster (*Boltonia decurrens*) occurs within a number of wetlands and non-wetlands. In the IL Route 3 project corridor, the decurrent false aster has been observed in wetland sites 5C, 6C, 8C, 9C, and 23C.

The U.S. Fish and Wildlife Service (USFWS) has provided a list of threatened and endangered species which may be present within the project corridor. These include the decurrent false aster (*Boltonia decurrens*), the bald eagle (*Haliaeetus leucocephalus*), the least tern (*Sterna antillarum*), the gray bat (*Myotis grisescens*), the Indiana bat (*Myotis sodalis*), running buffalo clover (*Trifolium stoloniferum*), and the eastern prairie fringed orchid (*Platanthera leucophaea*).

##### 1. Decurrent False Aster (*Boltonia decurrens*) - Federally and Illinois Threatened

*Boltonia decurrens* is a tall perennial forb in the sunflower family (Asteraceae) that is currently listed as Illinois and federally threatened respectively by the Illinois Endangered Species Protection Board and the U.S. Fish and Wildlife Service. This species is apparently endemic to the Illinois River valley. This species is limited to the floodplain of the middle-to-lower Illinois River and near the mouth of the Illinois along the Mississippi River in Illinois and Missouri (Taft, 1996). However, a single historic collection was also made from near Cape Girardeau, about 195 kilometers (121 miles) down the Mississippi River from St. Louis (Taft, 1996).

Suitable habitats for *B. decurrens* include wet prairies, shallow marshes, and river and lake shores. Habitat destruction, altered flooding patterns and duration, siltation, and probably herbicides have contributed to reductions of populations. *B. decurrens* is currently most often found in moist, alluvial soil. Many of the newly discovered populations are on recently disturbed land. Following soil disturbances, *B. decurrens* can appear, presumably from the soil seed bank, as a locally dominant species. Within three to five years, however, the shade intolerant *B. decurrens* typically is replaced by other species. Without periodic perturbations to the habitat that reduce the local competition for *B. decurrens*, colonies are susceptible to local extinctions (Taft, 1996).

*Boltonia decurrens* reproduces both vegetatively and by seed. Under nursery conditions, naturally stratified, fall planted seed produce mature flowering plants and a single leafy basal rosette the first year. Some first year flowering plants exceed 2 m in height. Basal rosettes that have been monitored in the wild produced flowering plants in the following year. Single stemmed flowering plants possess sessile basal shoots in the fall, and produce rings of disconnected flowering plants the following growing season. These ramets in turn produce leafy shoots that will presumably carry them into a third or fourth generation of vegetatively produced plants. As many as 11 plants have been observed to grow from a single stem of the previous year, giving a 2-year-old wild population a definite clumped appearance. Production of basal shoots is typical for

flowering plants of this species. The plants are prolific seed producers (The Decurrent False Aster Recovery Team, 1990).

Analysis of 19<sup>th</sup> century habitat data taken from herbarium sheets indicates that *B. decurrens*' natural habitat was the shores of lakes and the banks of streams including the Illinois River. It appears to require abundant light. It presently grows in such habitats but is more common in disturbed lowland areas where it appears to be dependent on human activity for survival (The Decurrent False Aster Recovery Team, 1990).

Historical collection records reveal that *B. decurrens* formerly ranged along a 400 km stretch between LaSalle, Illinois and St. Louis, Missouri within the Illinois and Mississippi River flood plains. A disjunct population, reported in 1976 but not found since, is known from Cape Girardeau, Missouri about 195 km down the Mississippi River from St. Louis (The Decurrent False Aster Recovery Team, 1990).

In a final rule making published in the Federal Register on November 14, 1998, the U.S. Fish and Wildlife Service determined that *B. decurrens* is a nationally threatened species under the authority of the Endangered Species Act of 1973, as amended (The Decurrent False Aster Recovery Team, 1990). It is believed that habitat destruction and modification were the main reasons for the decline in this species. Wet prairies and natural marshes have been eliminated within the species' range. Many natural lakes have been drained and converted to cropland as well. Shore habitats have been modified by heavy siltation and altered flooding regimes. Extensive row crop agriculture in the watershed and the numerous levee systems on the flood plain are responsible for these problems (The Decurrent False Aster Recovery Team, 1990).

Prolonged flooding during the growing season appears to be a limiting factor. In addition, *B. decurrens* populations may also be vulnerable to destruction by disking and herbicide use in low-lying marginal lands for crop weed control. Nearly all stands are in habitats kept open by occasional cropping. Future weed control efforts may destroy many of these plants or they may disappear due to habitat succession if cropping is stopped (The Decurrent False Aster Recovery Team, 1990).

The general character of the landscape within the survey area is very degraded, a consequence of a long history of multiple land uses that have resulted in the degradation of all plant communities. Extensive surveys in Illinois for this species were conducted from 1980 to 1985 by Schwegman and Nyboer (1985). These surveys located a total of 13 populations in Illinois. In 1989, Schwegman reported a total of 18 populations in Illinois; 5 previously known populations had disappeared, but 6 new populations were discovered. These 18 Illinois populations are located along the Illinois River in Jersey, Scott, Cass, Morgan, Schuyler, Fulton, Tazewell, and Marshall counties, and along the Mississippi River in St. Clair County. Five of the 18 are on State of Illinois property, 3 are on National Wildlife Refuges, and the remaining 10 sites are on private property. Naturally regenerating lake shore populations in Illinois increased markedly during the drought conditions in 1988 and 1989 (The Decurrent False Aster Recovery Team, 1990).

In 1988, searches were made for *B. decurrens* in 4 Missouri counties along the Mississippi River, 3 of which contained historical sites for the species. A total of 227 sites were searched in St. Louis, St. Charles, Lincoln, and Pike counties. Prior to this

survey only three extant populations of *B. decurrens* were known from Missouri. Although this survey was unable to find any plants at one of these locations, 10 new sites were discovered for *B. decurrens* in St. Charles County. It was not found in St. Louis, Lincoln, or Pike Counties (The Decurrent False Aster Recovery Team, 1990).

All new locations occur in the vicinity of the two previously known *B. decurrens* sites. Seven of the new locations are considered to be part of the Spatterdock Bottoms population and the remaining 3 new locations are part of the existing Columbia Bottoms population (The Decurrent False Aster Recovery Team, 1990). Of the 8 Spatterdock Bottom sites, 3 are privately owned, and 5 are under the jurisdiction of the St. Louis District, U.S. Army Corps of Engineers (The Decurrent False Aster Recovery Team, 1990).

Four separate colonies ranging from 185 plants to an estimated population size greater than 10,000 individuals were observed in the FA 999 New Mississippi River Crossing project corridor. All four colonies occur in fields that appear to have a history of cultivation or other severe disturbances. Three colonies were confined to moist depressions that may have been less frequently cultivated. These colonies occur within the American Bottoms on soils derived from alluvial deposits. Associated soils include the Darwin Variant silty clay loam and Gorham silty clay loam. These soils developed under a cover of bottomland trees and grasses and thus the natural regional habitats may have included wet to wet-mesic savanna (Taft, 1996).

The proposed realignment of IL Route 3 north of I-70/I-55 passes through one of the greatest concentrations of *B. decurrens* colonies known to exist. A total of 17 colonies and colony clusters occur within a mile of the proposed realignment of IL Route 3. (A diagram of the 17 colonies can be found within the Taft, 1997 report). Most of these colonies occur further than 100 meters from the proposed new Route 3 alignment. However, 10 colonies occur within a 600 m-wide corridor centered on the proposed Route 3 realignment. These are colonies #1, 2, 5, 6, 7, 8, 9, 12, 13, and 14. Several of the colonies observed in 1996-1997 that occur near the proposed realignment of IL Route 3 are in recently fallowed agricultural fields (Taft, 1997). Observations made by Illinois Natural History Survey botanist, Dr. John Taft, of numerous colonies of *B. decurrens* at two general locations within its range during 1997 (Schuyler County and in the vicinity of the present St. Clair County project area) indicate that the recruitment, establishment, and growth conditions for this species during 1997 apparently was ideal (Taft, 1997).

## **2. Bald Eagle (*Haliaeetus leucocephalus*) – Federally and Illinois Threatened**

Bald Eagle overwintering roosting activity has increased along the large river corridors in recent years in the states of Missouri and Illinois. The majority of wintering eagles are found near areas of open water; however, eagles have also been documented in terrestrial habitats during winter months (Environmental Science & Engineering, 1993). The Bald Eagle can be found any winter along the Mississippi and Illinois Rivers and at certain waterfowl refuges in southern Illinois. This species heavily utilizes the tailwaters of lock and dams during winter and is often observed near Melvin Price Locks and Dam (Collins, 1997).

Larger counts of Bald Eagles in Illinois occur later in winter after the eagles are forced out of the north by frozen water. As the water freezes on the lakes, more eagles are forced into the locks and dams that keep the water on the large rivers open.

By late February or early March, depending on the weather, Bald Eagles move north. As in fall, these migrants usually follow streams and rivers. Many years ago Bald Eagles were reported breeding in scattered areas throughout Illinois, with known sites in the lower Wabash Valley and in Lake, Marshall, Alexander, Gallatin, and Hamilton Counties. The last known site before recent times was Horseshoe Lake, Alexander County, in 1943. Then in the late 1970s nest building took place in Jo Daviess County, with actual nesting there in 1982 and 1985, Horseshoe Lake in 1978, and at Crab Orchard refuge in 1980-86. Several young have been fledged in all of these areas (Bohlen, 1989). In addition, a nest was established on Arsenal Island in 1994 but was unsuccessful in producing young (Collins, 1997).

Communal night roosting areas typically utilized by wintering eagles are among groups of large, tall trees along river corridors, and inland areas that are removed from human disturbance. In addition, the narrow riparian corridors and woodland areas may potentially provide suitable roosting sites. There is not historical documentation of Bald Eagles nesting within the project area along the Mississippi River (Environmental Science & Engineering, 1993). No area within the project location has a high potential for breeding or foraging habitat for any endangered or threatened bird species (Enstrom, 1998).

In addition, President Clinton announced on 2 July 1999 that the Bald Eagle is being removed from the federal Endangered and Threatened Species List. With the banning of DDT in 1972 and the passage of the Endangered Species Act a year later, the Bald Eagle began making a dramatic recovery. Today, there are 5,800 breeding pairs. President Clinton announced that the Bald Eagle is no longer in danger of extinction and the U.S. Fish and Wildlife Service is proposing that the Bald Eagle should be declared fully recovered (U.S. Fish & Wildlife Service, 1999). President Clinton also announced that the Bald Eagle is expected to be removed from the federal Endangered and Threatened Species List by July 2000. The Bald Eagle will continue to be protected from hunting and capture by two laws: the Migratory Bird Treaty Act, which prohibits the taking, killing, possession, transportation, and importation of migratory birds, and the Bald and Golden Eagle Protection Act, which bans the taking, possession, transportation, export, and import of a Bald or Golden Eagle, alive or dead (Knutson, 1999).

### **3. Least Tern (*Sterna antillarum*) – Federally and Illinois Endangered**

Suitable habitat for the state and federally endangered Least Tern includes major rivers and large reservoirs. The Least Tern nests on sandbars in major rivers and forages in the rivers and floodplain sloughs (Robinson, 1996). It is an endangered species in Illinois because its nesting areas have been flooded and people have overused its sandbar habitats (Bohlen, 1989).

They forage actively by plunge diving for small fish. Breeding is often evidenced by Least Terns carrying fish for long distances from the floodplain sloughs back to breeding

colonies on river sandbars. It is not unusual to see this species resting on small mudflats with shorebirds (Robinson, 1996). Suitable habitat for this species is not known to be present in the St. Louis harbor (Collins, 1997). In addition, Dr. David Enstrom, ornithologist of the Illinois Natural History Survey, stated that the project corridor contained no area with high potential as breeding or foraging habitat for any endangered or threatened bird species (1998).

Least Terns have been reported in southern Illinois since at least the late 1800s, but they have probably never been very numerous; they require isolated sandbars to breed successfully. In 1990, however, high water levels in the Ohio and Mississippi Rivers flooded all the traditional breeding colonies, so the terns nested on land. Least Terns have been observed in the Riverlands Areas along the Mississippi River, but are presumed to have been migrants (Collins, 1997). The only recent nesting area within Illinois is in Alexander County, where 18 nests were found in 1986 (Bohlen, 1989). According to Vern Kleen, ornithologist for the Illinois Department of Natural Resources, Least Terns nest below the bridge by East Cape Girardeau in Alexander County. The replacement of the East Cape Girardeau bridge is currently under construction. Current known colonies are monitored each year by the Illinois Department of Natural Resources and the Missouri Departments of Conservation (Robinson, 1996).

#### **4. Gray Bat (*Myotis grisescens*) – Federally and Illinois Endangered**

Suitable habitat for the gray bat includes different roosting sites in summer and winter. Different caves are occupied during summer and winter because of different temperature requirements of maternity colonies and hibernating bats (Hofmann, 1997). In the summer, females congregate in large maternity colonies, and a few males are also present. These colonies are almost always in caves or mine shafts. In the winter, males and females are together in hibernating clusters.

Gray bats usually forage over water and adjacent riparian vegetation for insects. The vegetative cover consists of sycamores, willows, cottonwoods, ash, elm, maples, and bitternut hickories. In addition, the gray bat forages over small as well as large streams and forages almost exclusively within 2 kilometers (1 mile) of a cave (Hofmann, 1997).

There are relatively few records for the gray bat in Illinois, primarily from west-central and southern portions of the state. Migrant gray bats are known to have used four caves and mines in Adams and Pike counties as transient roosts, and a large maternity colony formerly occurred in a Hardin County cave. There are no records for St. Clair County, but two specimens have been collected in adjacent Madison County – one from a cave 13 kilometers (8 miles) east of Elsah, the other from a sewer in Alton (Hofmann, 1997).

In recent years this species has been found only in Alexander, Hardin, Johnson, Pope, and Pulaski counties in far southern Illinois during the summer and only one individual has been found hibernating in the state. Because there are no caves or abandoned mines in or near the project corridor, this area does not provide suitable habitat for gray bats (Hofmann, 1997).

## 5. Indiana Bat (*Myotis sodalis*) – Federally and Illinois Endangered

Suitable habitat for the Indiana bat includes different roosting sites in the summer and winter. In the winter, Indiana bats hibernate in caves and in mines. In most cases, large numbers constituting as much as 90 percent of the species population hibernate in a few caves or mines. Probably all of the wintering bats in Illinois represent colonizers from the larger wintering populations in Missouri and Kentucky. The summer habitat of the Indiana bat was poorly known until recently because few individuals of the species were ever collected in the summer. Small colonies or groups of males were known from the summer, but these probably represent only a small fraction of the winter population. The number of females known from the summer was less than one percent and no maternity colonies were known until 1974. The requirements for nurseries for pregnant females appear to be dead trees with loose bark or living trees with shaggy bark under which the females can roost, parturate, and rear their offspring. Such trees have usually been found along or near waterways or ponds (Hoffmeister, 1989). Roost trees used by this species have been located in both upland and floodplain forests and most are relatively large (> 22 cm dbh). Tree species that have been used by maternity colonies in Illinois are slippery elm (*Ulmus rubra*), northern red oak (*Quercus rubra*), shagbark hickory (*Carya ovata*), silver maple (*Acer saccharinum*), cottonwood (*Populus deltoides*), post oak (*Q. stellata*), bitternut hickory (*C. cordiformis*), white oak (*Q. alba*), American elm (*U. americana*), green ash (*Fraxinus pennsylvanica*), and sycamore (*Plantanus occidentalis*) (Hofmann, 1997). Reproductive females and young have been reported as foraging along streams, edges of a lake, over floodplain trees, upland woods, and at the edges of woodlots. Males tend to forage among trees more than over or along waterways (Hoffmeister, 1989).

Indiana bats occur mostly in the mid-United States and are most numerous in the winter in Missouri, Kentucky, and southern Indiana. Why they are not large concentrations of Indiana bats in southern Illinois is not clear (Hoffmeister, 1989). The only historical Indiana bat records for St. Clair and the adjacent counties are for specimens that were collected at two locations in Madison County. Five individuals from a cave near Alton were collected during late November, 1973, and would have been hibernating. An individual collected in Edwardsville in October, 1968, was probably a migrant. Three caves and mines in Illinois currently are known to be significant hibernacula for Indiana bats, including Fogelpole Cave in southern Monroe County. Since 1983, extensive mist-netting and cave surveys have produced summer records of Indiana bats from 22 counties in the southern two-thirds of Illinois. None of these records is for St. Clair, Madison, Monroe, Randolph, or Clinton counties (Hofmann, 1997). There is no suitable roosting or foraging habitat for Indiana bats in the project corridor (Hofmann, 1997).

## 6. Running Buffalo Clover (*Trifolium reflexum*) – Federally and Illinois Endangered

Running buffalo clover is a disturbance-dependent plant species which has been historically observed occurring along railroads and sandy floodplains (Environmental

Science & Engineering, 1993). The occurrence of running buffalo clover in St. Clair County is historical. No populations are currently known to occur in the area (Collins, 1997).

#### **7. Eastern Prairie Fringed Orchid (*Platanthera leucophaea*) – Federally Threatened and Illinois Endangered**

The eastern prairie fringed orchid naturally occurred in mesic and wet prairies throughout Illinois. Its distribution is now predominantly limited to a few counties in northeastern Illinois, where it is found in protected areas such as nature preserves and parks. There is no critical habitat for the eastern prairie fringed orchid within the project corridor (Draft Environmental Impact Statement IL Route 3, 1999).

#### **8. Other Federally Threatened and Endangered Species with Historical Occurrences within the Project Corridor**

Field surveys were conducted for federally threatened and endangered species with a historical record of occurring within the project corridor. It was then determined that these species were not within the project corridor. Species not within the project corridor included the federally and Illinois endangered Illinois cave amphipod (*Gammarus acherondytes*) (Collins, 1997), the federally and Illinois endangered Peregrine Falcon (*Falco peregrinus*) (Enstrom, 1998), the federally and Illinois endangered fat pocketbook pearly mussel (*Potamilus capax*) (Dunn, 1997), the federally and Illinois endangered wavy-rayed lampmussel (*Lampsilis higginsii*) (Dunn, 1997), and the federally and Illinois endangered pallid sturgeon (*Scaphirhynchus albus*) (Kitchel, Taylor, and Wetzel, 1995). Even though in recent years the Missouri Department of Conservation released hatchery reared pallid sturgeon into the Missouri and Mississippi River, it was determined that because of the amount of industrial development and commercial boat traffic found at the proposed project site (FA 999), it is highly unlikely that the pallid sturgeon occurs within the project corridor. Low water quality in the project area and lack of recent collection records indicate that the pallid sturgeon does not occur within the project corridor. Considering the size of the river at the project site, most fishes would likely move to other areas during instream construction activities (Kitchel, Taylor, and Wetzel, 1995).

### **V. Analysis of Illinois Threatened and Endangered Species within the Proposed Area**

A number of Illinois listed bird species forage within the project corridor. These include the Little blue heron (*Egretta caerulea*), snowy egret (*Egretta thula*) and Black-crowned night heron (*Nycticorax nycticorax*). These birds are most likely associated with the Alorton Rookery in East St. Louis, which is approximately 4.0 kilometers (2.5

miles) east of the southern terminus of the FA 14 (Relocated Illinois Route 3) project corridor. Within the project corridor, the Little blue heron was observed foraging at sites 6A, 6, 34 and 37 within the IL Route 3 project corridor; the Snowy egret at sites 6A and 6 within the IL Route 3 project corridor; and the Black-crowned night heron at sites 18 and 34 within the IL Route 3 project corridor. In addition, the state threatened Loggerhead Shrike (*Lanius ludovicianus*) was observed within the FA 999 new bridge project corridor, however, was thought to be a migrant. A description of Illinois endangered and threatened birds within the IL Route 3 and FA 999 New Bridge project corridors are as follows:

### 1. Little Blue Heron (*Egretta caerulea*) – Illinois Endangered

The Little Blue Heron is a small, dark heron of both fresh and salt water (Robbins, Bruun, and Zim, 1986). Suitable habitat for the Little Blue Heron includes marshes, sloughs, rivers, and reservoirs. If the spring weather has been usually warm, Little Blue Herons will arrive in southern Illinois in late March; however, the usual arrival time of this species to the state in general is early April (Robinson, 1996, and Bohlen, 1989). Little Blue Herons that have been seen in spring in central and northern Illinois are considered to be overmigrants (Bohlen, 1989). In addition, late-spring sightings in southern Illinois may represent late migrants or birds that have wandered in from nearby colonies in neighboring states to forage (Robinson, 1996). Post-breeding wandering may begin in early July. The average date for central Illinois is July 30. An influx of post-breeding wanderers occurs into southern Illinois in early July. Wanderers include not only herons from southern Illinois but also some from farther south as evidenced by banding recoveries (Bohlen, 1989). The average fall departure date for migrants from central Illinois southward is August 25<sup>th</sup>. Most birds are gone by the end of September, with a few lingering as late as October.

As of 1989, there were only three colonies in Illinois- one each in St. Clair, Madison, and Alexander Counties with a total of 125 pairs in 1985. In their colonies, these herons usually nest with other species, such as the Black-crowned Night Heron. They build platform nests, usually placing them fairly low (five to 10 feet) in dense vegetation but occasionally up to 40 feet high. Little Blue Herons feed on fish, crayfish, insects, and frogs (Bohlen, 1989).

The largest nesting concentration of Little Blue Herons in the state of Illinois is found in the vicinity of the project area. Little Blue Herons nested at Alorton rookery, which is approximately 4.0 kilometers (2.5 miles) east of the southern terminus of the IL Route 3 project corridor. Little Blue Herons were seen flying over Alignment 2 of the IL Route 3 project corridor on numerous occasions, and were found foraging within this Alignment during the breeding seasons of 1995, 1996, and 1997 (Enstrom, 1998).

Because of the presence of the Alorton rookery, foraging herons and egrets are common throughout St. Clair and Madison counties during the breeding season (from mid-April through July). No areas within the project area have a high potential for breeding or foraging habitat for endangered or threatened bird species (Enstrom, 1998).

### 2. Snowy Egret (*Egretta thula*) – Illinois Endangered



Suitable habitat for Snowy Egrets include sloughs, flooded fields, and marshes (Robinson, 1996). They are found mostly in fresh- and salt-water marshes, but sometimes they are found in ponds (Robbins, Bruun, and Zim, 1986). In Illinois, they are most numerous in the southwest along the Mississippi River to Madison County. Snowy Egrets usually nest in trees, laying three to four greenish blue eggs. However, little is known about the nesting cycle in Illinois (Bohlen, 1989).

The Snowy Egret is a small, slim egret with a black bill, black legs, a yellow loreal spot, and yellow feet. Immatures, though a little less distinct than adults, are reasonably easy to identify. The Snowy Egret's feeding methods are highly variable but usually quite active, including fluttering over the water and running through the water to catch prey (Bohlen, 1989).

Snowy Egrets are generally more numerous during the fall than the spring in Illinois, but numbers vary in both seasons from year to year. The first arrivals in Illinois are most typically encountered in the last few days of April. Daily high counts in the spring in Illinois rarely exceed one to three birds. A few birds are present all summer, so it is difficult to confidently identify average spring departure dates. In most years, however, it is likely that sightings during June are of birds from the small colony in nearby southeast Missouri. In addition, post-breeding wanders begin appearing during mid-July in Illinois, and numbers peak from late July through mid-August. Most have departed by the end of the first week in September (Robinson, 1996).

The only nesting sites of Snowy Egrets in the state of Illinois are found at the Alorton rookery according to Dr. David Enstrom, ornithologist for the Illinois Natural History Survey (1997). However, according to H. David Bohlen, author of The Birds of Illinois, a few Snowy Egrets breed near Horseshoe Lake and in the American Bottoms in St. Clair County, but the number of breeding pairs varies from year to year and some years there apparently are none at all. Breeding is suspected at Lake Renwick. In addition, according to Vern Kleen, ornithologist for the Illinois Department of Natural Resources, in a telephone conversation on 19 July 1999 to Susan Dees, biologist for the Illinois Department of Transportation, Snowy Egrets also nest near the intersection of Illinois Route 3 and Illinois Route 146 in Alexander County (1999).

Because of the presence of the Alorton rookery, foraging Herons and Egrets are common throughout St. Clair and Madison counties during the breeding season (from mid-April through July). No areas within the project location have a high potential for breeding or foraging habitat for endangered or threatened bird species (Enstrom, 1998).

### **3. Common Moorhen (*Gallinula chloropus*) – Illinois Threatened**

Suitable habitat for the Common Moorhen includes cattail marshes, swamps, and edges of lakes (Robinson, 1996). It is especially prevalent at Lake Calumet, Powderhorn Marsh, Eggers Marsh, Redwing Slough, and the marshes in the East St. Louis Area. It nests elsewhere only haphazardly when the appropriate habitat is present. Most nests are in marshes and are made of dead plants and other debris (Bohlen, 1989). They swim in the open infrequently and are not very vocal. In addition,

they resemble coots but are smaller, have a white horizontal stripe on their sides, and a reddish bill (Robinson, 1996).

The Common Moorhen is a rare migrant to Illinois and a very rare summer resident. This species stays in the edge of dense vegetation and can be difficult to see (Robinson, 1996). Moorhens seem to arrive in spring at varying times, perhaps because of the difficulty in detecting them and the varying availability of habitat in a given locality. Fall migration is even less noticeable than spring migration (Bohlen, 1989).

The Common Moorhen's known breeding and summering sites are primarily on reclaimed strip-mine ponds that have extensive emergent vegetation (Robinson, 1996). The Common Moorhen feeds along the edge of open water and, when disturbed, seeks cover in dense vegetation. The Common Moorhen swims well and walks on lily pads (Robbins, Bruun, and Zim, 1986).

According to records provided by the Illinois Department of Natural Resources in the Endangered Species Consultation Program Agency Action Reports for the FA 999 New Mississippi River Bridge and the Illinois Route 3 projects, the Common Moorhen is found in Eagle Park Marsh INAI. Eagle Park Marsh INAI is located approximately 0.40 kilometers (0.25 miles) north of the FA 999 New Mississippi River Bridge project corridor (Agency Action Report, 1996) and approximately 0.40 kilometers (0.25 miles) east of the Illinois Route 3 project corridor (Agency Action Report, 1997). Because Eagle Park Marsh INAI is not within the project corridor, no adverse impacts are expected to the Common Moorhen. No areas within the project location have a high potential for breeding and foraging habitat for endangered and threatened bird species (Enstrom, 1998).

#### **4. Black-crowned Night Heron (*Nycticorax nycticorax*) – Illinois Endangered**

Suitable habitat for the Black-crowned Night Heron includes marshes, sloughs, rivers, reservoirs, and wooded swamps (Robinson, 1996). As the name implies, they feed at night but also in the twilight hours. They migrate mostly nocturnally and can be heard calling as they pass overhead. In the daytime, they can be seen sitting quietly in trees or dense vegetation, usually at the water's edge. Adults in breeding plumage are patterned black, gray, and white with white plumes on the back of their heads. Immatures are streaked buff and brown ventrally; dorsally they are brown spotted with buff. These herons eat mostly fish, including gizzard shad, carp, and sunfish (Bohlen, 1989).

The Black-crowned Night Heron is a rare summer resident to Illinois and a very rare winter visitor. This species frequents dense vegetation and can be difficult to detect. They may come out into the open to forage in the early morning and in the late afternoon and evening (Robinson, 1996). These herons nest in trees or in marshes, sometimes with other species, including Great Blue Herons, Great Egrets, and Little Blue Herons. They lay three to six greenish blue eggs on a rather flat platform nest. After the nesting season, part of the population moves north before returning south. This movement usually swells the numbers recorded in Illinois during July and August (Bohlen, 1989).

The Black-crowned Night Heron, like other heron species, is declining in numbers and has been for the past half-century. In 1987, there were eight known colonies in Illinois, ranging in size from 28 nests at Clear Lake to 659 nests in Madison County (Bohlen, 1989). In addition, the Black-crowned Night Heron also breeds in southeast Missouri across from Alexander County, Illinois. Therefore, sightings in Alexander County during late May and June may be of individuals dispersing from that colony (Robinson, 1996). According to Susan Dees, biologist for the Illinois Department of Transportation Central Office, another breeding site for the Black-crowned Night Heron occurs at the Alorton rookery. According to Dr. David Enstrom, ornithologist for the Illinois Natural History Survey, no areas within the project location have a high potential for breeding and foraging habitat for endangered and threatened bird species (Enstrom, 1998).

#### **5. Pied-billed Grebe (*Podilymbus podiceps*) – Illinois Threatened**

Suitable habitat for the Pied-billed Grebe includes ponds, lakes, and marshes. Although they sometimes are found in the middle of large lakes, they seem to prefer foraging and resting in the shallow bays of lakes. The Pied-billed Grebe is found in Illinois as a spring and fall migrant and is uncommon as a winter resident. It is a rare summer visitor and very rarely breeds in Illinois (Robinson, 1996). The Pied-billed Grebe is found in shallow fresh water and rarely in salt water. This species is small, solitary, and rarely flies. It escapes by diving or slowly sinking below the surface (Robbins, Bruun, and Zim, 1986).

More nesting for the Pied-billed Grebe occurs in northern and central than in southern Illinois. These birds make a floating mat for a nest and anchor it to other vegetation. The Pied-billed Grebe has been noted eating fish and crawfish (Bohlen, 1989).

Even though some Pied-billed Grebes overwinter, there is a noticeable influx fairly early in the year. Spring bird counts generally come after the peak for this species, but totals have varied from 84 to 393, with northerly counties having the highest totals. As early as late June or early July, Pied-billed Grebes begin to move around, perhaps because some ponds are drying up. These movements are associated with cold fronts. During migration these birds are often found on open water. Like loons and ducks, they drift in the late evening toward the middle of the lake. They also do less diving and can be counted more easily (Bohlen, 1989).

According to records provided by the Illinois Department of Natural Resources in the Endangered Species Consultation Program Agency Action Reports for the FA 999 New Mississippi River Bridge and the Illinois Route 3 projects, the Pied-billed Grebe is found in Eagle Park Marsh INAI. Eagle Park Marsh INAI is located approximately 0.40 kilometers (0.25 miles) north of the FA 999 New Mississippi River Bridge project corridor (Agency Action Report, 1996) and approximately 0.40 kilometers (0.25 miles) east of the Illinois Route 3 project corridor (Agency Action Report, 1997). Because Eagle Park Marsh INAI is not within the project corridor, no adverse impacts are expected to the Pied-billed Grebe. No areas within the project location have a high potential for breeding and foraging habitat for endangered and threatened bird species (Enstrom, 1998).

## 6. Yellow-headed Blackbird (*Xanthocephalus xanthocephalus*) – Illinois Endangered

Suitable habitat for the Yellow-headed Blackbird includes agricultural fields, marshes, or feeders. The Yellow-headed Blackbird is a very rare migrant and winter visitor to Illinois. There may be some Yellow-headed Blackbirds that regularly overwinter amid the roosts of millions of other blackbirds in the strip mines of Perry, Williamson, Franklin, and Jefferson Counties in Illinois. There are a few fall sightings of the Yellow-headed Blackbird in Illinois, however, most records are from winter and spring (Robinson, 1996).

The average spring arrival of the Yellow-headed Blackbird is May 1. High counts are usually obtainable only on the breeding grounds. If these birds migrate in large flocks, few if any have been noted recently. Recent breeding areas are Redwing Slough, Lake Calumet, Illinois Beach State Park, Kane County marshes, DuPage County marshes, Moraine Hills State Park, Beardstown Marsh, Havana, Eggers Woods, Round Lake, Horseshoe Lake, and other areas, especially in northeastern Illinois. Breeding downstate seems to last only one to a few years. Fall migrants have been noted as early as July and August. In fall and winter Yellow-headed Blackbirds feed with other blackbirds in cultivated fields and feedlots, sometimes at bird feeders. In addition, there are a few winter records in Illinois even though the normal winter range is the southwestern United States south to southern Mexico (Bohlen, 1989).

According to records provided by the Illinois Department of Natural Resources in the Endangered Species Consultation Program Agency Action Reports for the FA 999 New Mississippi River Bridge and the Illinois Route 3 projects, the Yellow-headed Blackbird is found in Eagle Park Marsh INAI. Eagle Park Marsh INAI is located approximately 0.40 kilometers (0.25 miles) north of the FA 999 New Mississippi River Bridge project corridor (Agency Action Report, 1996) and approximately 0.40 kilometers (0.25 miles) east of the Illinois Route 3 project corridor (Agency Action Report, 1997). Because Eagle Park Marsh INAI is not within the project corridor, no adverse impacts are expected to the Yellow-headed Blackbird. No areas within the project location have a high potential for breeding and foraging habitat for endangered and threatened bird species (Enstrom, 1998).

## 7. King Rail (*Rallus elegans*) – Illinois Endangered

The King Rail is a large rust-colored bird, and the chicks are black with the entire bill pale white (Robbins, Bruun, and Zim, 1986). Suitable habitat for the King Rail includes cattail marshes and tall-sedge meadows.

This species is a rare migrant through Illinois. It is a very rare summer resident and a very rare winter visitor. The King Rail was formerly more numerous in Illinois, but destruction of marshes and other wetlands have eliminated appropriate habitats (Robinson, 1996). Because of the drop in numbers and the difficulty of detection, spring bird counts totals are quite low. Very few King Rails are seen in fall. Apparently many migrate fairly early, and dense vegetation conceals others. Most records are for

July and August. In addition, winter records are very rare (Bohlen, 1989). According to Dr. David A. Enstrom, ornithologist for the Illinois Natural History Survey, breeding King Rails were observed during field surveys approximately 3.2 kilometers (2.0 miles) south of the southernmost terminus of the IL Route 3 project corridor. No areas within the project location have a high potential for breeding and foraging habitat for endangered and threatened bird species (Enstrom, 1998).

## 8. Other Illinois Threatened and Endangered Species with Historical Occurrences within the Project Corridor

Field surveys were conducted for Illinois endangered and threatened species with a historical record of occurring within the project corridor. It was determined that these species were not within the project corridor. Species not within the project corridor included the Illinois threatened river otter (*Lontra canadensis*) (Hofmann, 1997), Illinois endangered and federal candidate Eastern massasauga (*Sistrurus catenatus*) (Phillips and Petzing, 1997), Illinois threatened and former federal candidate (former category 2) Illinois chorus frog (*Pseudacris streckeri illinoensis*) (Tucker, 1994, 1996 and 1999), Illinois endangered and former federal candidate (former category 2) alligator snapping turtle (*Macrolemys temmincki*) (Phillips, 1994), Illinois endangered cinquefoil (*Potentilla millegrana*) (Draft EIS FA 999, 1998), and Illinois endangered pink mucket (*Lampsilis abrupta*) (Dunn, 1997). Other species with historical records within the area but were determined not to be within the project corridor included the Illinois endangered lake sturgeon (*Acipenser fulvescens*), Illinois endangered pallid shiner (*Hybopsis amnis*), Illinois endangered sturgeon chub (*Macrhybopsis gelida*), and the Illinois endangered western sand darter (*Etheostoma clarum*) (Kitchel, Taylor, and Wetzel, 1995). It was determined that given the amount of industrial development and commercial boat traffic found at the proposed project site, it was believed that it is highly unlikely that populations of lake sturgeon, pallid shiner, sturgeon chub, and west sand darter would occur within the project location. Considering the size of the river at the project site, most fishes would likely move to other areas during instream construction activities (Kitchel, Taylor, and Wetzel, 1995). In addition, the formerly Illinois endangered sour dock (*Rumex hastatulus*) was delisted in December 1998. This species is possibly extirpated in Illinois. Searches for historic collection localities within the project corridor failed to located any plants (Taft, 1996)

# VI. Summary of Impacted Species for FA 999 and Illinois Route 3 Projects

## 1. Summary of *Boltonia decurrens*

*Boltonia decurrens* is present in the project area within the corridor for FA 999 Alternate Alignment 2 and Illinois Route 3 projects. Four separate colonies ranging from

185 plants to an estimated population size greater than 10,000 individuals were observed in the FA 999 project area (Taft, 1996). The Illinois Route 3 project passes through one of the greatest concentrations of *Boltonia decurrens* colonies known to exist with a total of about 17 colonies and colony clusters occurring within a mile of the proposed realignment (Taft, 1997).

There are several minimization or avoidance strategy options to minimize impacts to *B. decurrens*. A shift in alignment of the projects could miss populations. However, this species has a tendency to appear at different places on an annual basis; therefore, the species could appear at a shifted location at a later date. The alignments could be shifted and the cross section could be adjusted to minimize damage to populations. Mitigation could be performed ahead of the project by creating a *B. decurrens* preserve. Moreover, the individuals could physically be moved with large equipment such as end loaders or tree spades to move the plants to suitable sites. Seeds could be gathered to be planted in a suitable habitat to encourage propagation. In addition, physically mowing the plant and associated soil at the proper time can help to scatter the seeds (The Decurrent False Aster Recovery Team, 1990).

## 2. Summary of Birds

No areas within the project location have a high potential for breeding and foraging habitat for endangered and threatened bird species (Enstrom, 1998). Therefore, a mitigation site for threatened and endangered bird species is not anticipated. Bird populations that inhabit the majority of the New Mississippi River Bridge and the relocated Illinois Route 3 corridor are typical of representatives of avian communities that are associated with the respective cover types present. Due to the extensive urbanization and industrialization that has occurred within the project area, very little habitat diversity or suitable habitat remains available for use by native avifauna. The most important areas with respect to bird species are the wetland areas.

## VII. Cumulative Impacts

Cumulative impacts may occur because of the development of the new Mississippi River Bridge project (FA 999) and the Illinois Route 3 project. For example, roadway improvements may increase the amount of automobiles and urban sprawl within Madison and St. Clair Counties. Development within this area may include stores, restaurants, gas and service stations, golf courses, subdivisions, and improvements to the Gateway International Raceway. With increased development, loss of habitat occurs for threatened and endangered species. In addition, with scarcity of land, land prices increase. Therefore, it is critical to take various measures to protect threatened and endangered species within the project corridors. For example, the Illinois Department of Transportation has taken various measures in project *B. decurrens* with other road projects throughout the state. Examples of other road projects are as follows:

McClugage Bridge occurs over the Illinois River in Peoria and Tazewell Counties. The proposed project involves bridge repair, structural steel repairs and deck replacement for the eastbound McClugage Bridge. The botanical survey performed for this project located a large population of *B. decurrens* beneath the McClugage Bridge on the Peoria side of the Illinois River. On September 9, 1998, Dr. Steve Hill (INHS) and Paula Green (IDOT District 4) visited the site and staked out the current locations of the plant communities. In order to avoid and minimize impacts to the *B. decurrens* population, the following measures will be implemented by the District,

1. In September 1998, steel pins were placed along the perimeter of the *B. decurrens* colonies. Using these pins as a guide, *B. decurrens* located outside the anticipated area of impact will be fenced off to prevent access.
2. The soil containing the *B. decurrens* plants within the construction limits will be stockpiled during construction of the bridge. After construction that stockpiled soil, containing the *B. decurrens* seed bank, will be spread back in the disturbed area.
3. Safety nets or other positive means of catching debris will be required.
4. The Environmental Coordinator will inspect and approve the fenced off areas (Nowack, March 15, 1999).

The Hennepin Bridge occurs over the Illinois River in Putnam and Bureau Counties. The proposed project involves demolition and removal of the nineteen span structure over the Illinois River, removal of river piers and approach pavement, temporary road construction for equipment access and tree removal. This demolition and removal is necessary because the Coast Guard has requested the structure be removed from over the river. The INHS botanical survey found a large population of *B. decurrens* on the west side of the Illinois River within the Hennepin Bridge project area. A construction equipment access road is necessary for equipment to gain access to the piers and structural steel on the bridge on the west bank of the river. The road will be constructed by placing a geo-synthetic fabric down over the soil area and then placing clean aggregate fill over the fabric for the access road to perform the work.

In order to avoid impacts to the decurrent false aster in this area, it has been proposed by the District to remove the bridge piers to ground level on the west bank of the river. No excavation will occur below the surface within the pier areas thereby reducing impacts to the plant. It is proposed that the project be scheduled for construction to occur in the winter months, thus eliminating impacts to growing plants (Nowack, August 25, 1999).

The Illinois 100 project is located from US 67 to the Wilson Creek Bridge, 0.75 miles south of the Fulton County line in Schuyler County. The proposed project involves 17.4 miles of pavement widening and resurfacing; drainage and safety improvements (some culvert extensions, guardrail improvements; side road intersection improvements, berm construction, reshaping ditches); six bridge replacements and two bridges with minor repairs. On September 9, 1997, INHS botanist John Taft, with the assistance of IDOT

Central office Department staff, remeasured distances from the road, and marked on the project plans, the roadway limits of the currently existing colonies of *B. decurrens*. Based on this information, a silt fence will be placed at either the roadway edge of the colonies or at the construction limits of the right-of-way line, to protect the colonies during project construction. A silt fence will also protect the colonies from the possibility of being buried by silt during construction. The District has imposed a mowing restriction between June 1 and November 1 to allow the colonies to reproduce (i.e. to produce viable seed). The District will also install "No Mow or Spray" signs along the right-of-way in the areas selected for protection, to deter mowing or spraying by utility companies or private individuals. In addition, to compensate for the individual *B. decurrens* plants that will be destroyed during construction, certain areas on right-of-way which are potentially suitable habitat but where *B. decurrens* is not present, will be disturbed by disking and seed will be distributed by hand (Nowack, October 17, 1997).

The three mentioned examples listed above are of other road projects in Illinois in which measures have been taken to reduce the adverse impacts to *B. decurrens*. Based on these examples of successful measures to reduce adverse impacts to *B. decurrens* during construction, the following is recommended for the new Mississippi River Bridge (FA 999) and IL Route 3 road improvement:

1. Locate areas within the project corridors containing *B. decurrens* and fence off those areas to prevent access.
2. The soil containing *B. decurrens* plants within the project corridors will be stockpiled during construction. After construction, that stockpiled soil containing the *B. decurrens* seed bank, will be spread back in the disturbed area.
3. The Environmental Coordinator will inspect and approve the fenced off areas.
4. Gather mature seed within the project corridors, place the seeds in cold storage at a nursery, and sow the seed in suitable bare soil areas when construction is complete. Since seed remains on the plant throughout winter (seed heads do not shatter) and seed viability increases as fall and winter progress, seed should be collected as late in the fall as possible, and then placed in cold storage for planting in the summer or fall when the construction is finished.
5. Select areas on the right-of-way which are potentially suitable habitat but where *B. decurrens* is not present and will be disturbed by disking. Plant the seed in these areas by hand.



## VIII. Conclusion

Besides taking measures to minimize any adverse impacts to *B. decurrens*, wetland and *B. decurrens* mitigation sites are currently being pursued by the Illinois Department of Transportation (IDOT) District 8 (Collinsville, IL) and Central Office (Springfield, IL) staff. Several areas within Madison and St. Clair Counties would provide suitable habitat for wetland mitigation sites. The Illinois Department of Transportation District 8 office recently purchased a 26.7-hectare (66.0-acre) golf course in St. Clair County for \$550,000 for *Boltonia decurrens* and wetland mitigation. The golf course is located approximately ¼ of a mile east of U.S. 40, ¼ of a mile east of the Fairmont City INAI site (which contains *B. decurrens*), and directly south of the Old Cahokia Creek on the Monks Mound Topographical map at T 2N/R 9W/Sec 4.

A site near State Park Place in St. Clair County located on the Monks Mound Topographical map at T 2N/R 9W/Sec 1 is being considered for wetland mitigation. Another site being considered is an area near Caseyville in St. Clair County located on the Monks Mound Topographical map at T 2N/R 8W/Sec 7. In addition, Land and Water Inc. are negotiating with the Illinois Department of Transportation District 8 office on creating a 80.9-93.1 hectare (200-230 acre) wetland mitigation site for \$42,500 an acre.

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**Decurrent False Aster (*Boltonia decurrens*)**

**Colonies and Associated Habitats**

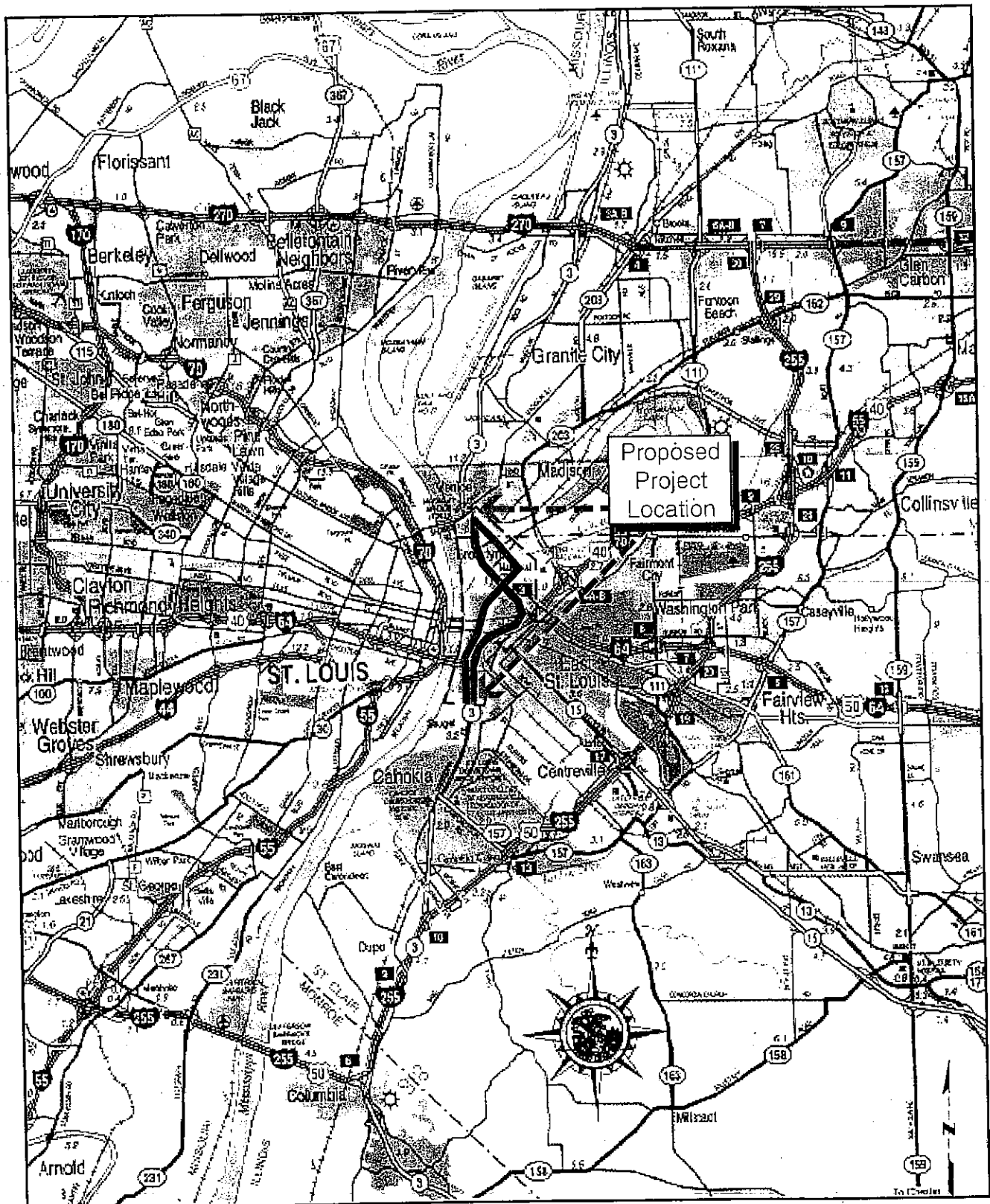
**Table 2.18**

Colony No.	Colony Size	Associated Habitat*	Comments
1	~50-100 plants Area = 14 m x 15 m	Wetland H	Moist old field
2	Area = 45 m x 20 m Cover = ~45%	Wetland B	Fallow crop field, plants in moist depression
3	~250-400 plants Area = ~90 m x 20 m	N/A	Old field with locally dense patches
4	~64 plants	Wetland O	Several clusters of plants
5	~45 plants	N/A	Three clusters in fallow crop field
6	~30 plants	N/A	Abandoned field (hog production)
7	~200-250 plants	Wetland C	Moist depression at edge of crop field
8	~30-40 plants	N/A	Abandoned field
9	~500-1000 plants	N/A	Fallow cropland adjacent to golf course
10	~18 plants	Wetland J	Small wetland within golf course
11	~1,500-2,000 plants	Wetland L	Fallow cropland/old field
12	~10-20 plants	Wetland I	Depression between railroad tracks
13	~20-30 plants	Wetland E	Depression in fallow crop field
14	~5-10 plants	Wetland F	Border of linear depression adjacent to hog facility
15	<5 plants	Wetland N	Mowed field
16	~185 plants	Wetland X	Perimeter of shallow depression
17	~211 Area = 45 x 10 m	Wetland Y	Small depression with degraded marsh vegetation
18	~1,000-2,000	N/A	Moist depression in cultivated field
19	>10,000 Area = 30-50 m x 400-500 m Max. Density = 250 plants/100 m <sup>2</sup> Cover = 25-50% of every 100 m <sup>2</sup> has plants present	Wetland W	Cultivated wet meadow
20	9 plants	Wetland AA	Wet meadow
21	<5 plants	Wetland BB	Wet meadow

\*Wetlands are shown in Figure 2.H.

**Identified Colonies of Decurrent False Aster Potentially Impacted** **Table 4.13**

Colony No.	Project Site Location	Population Characteristics	Comment
1	Wetland H	~50-100 individuals in 14 m x 15 m area in moist old field.	Impacted by proposed interchange at relocated IL Rt. 3 and relocated railroad. Impacts are addressed in IL Rt. 3 DEIS.
2	Wetland B	~45% cover within 45m X 20m area, estimated to be 100-200 plants.	Entire colony displaced by relocated Cahokia Canal segment.
3	Old field	~250-400 plants in 90 m x 20 m area	No direct impact. Located south of Cahokia Canal.
4	Wetland O	~64 plants within several clusters.	Partially displaced by relocated I-70, estimated to affect almost entire colony, or roughly 60 plants.
5	N/A	~45 plants.	Adjacent to proposed interchange at relocated IL Rt. 3. Impacted by IL Rt. 3 relocation; impacts are addressed in IL Rt. 3 DEIS.
6	N/A	~30 plants.	No direct impact. Adjacent to proposed interchange with relocated IL Rt. 3.
7	Wetland C	~200-250 Plants. Colony is within moist depression at edge of field fallow in 1997.	Adjacent to relocated I-70. Entire colony displaced by interchange with relocated IL Rt. 3.
8	Abandoned field	~30-40 plants.	Impacted by proposed interchange at relocated IL Rt. 3 and relocated railroad. Impacts are addressed in IL Rt. 3 DEIS.
9	In field adjacent to new golf course.	~500 - 1,000 plants.	Southern edge of colony within right-of-way of relocated I-70. Project may directly impact extreme southern edge of colony (5% or approximately 25 to 50 plants).
10	Wetland J	~18 plants. Colony within wetland filled by golf course construction.	Entire colony displaced by relocated I-70. Colony may have been extirpated by golf course construction.
11	Wetland L	~1,500-2,000 plants in fallow cropland/old field.	Partially displaced (80% or approximately 1,200 to 1,600 plants) by relocated I-70.
12	Wetland I	~10-20 plants in depression between two railroad tracks.	Entire colony displaced by interchange at relocated IL Rt. 3 and railroad relocation; impacts addressed in Route 3 DEIS.
13	Wetland E	~20-30 plants in depression in fallow crop field.	No direct impact. Adjacent to proposed interchange at relocated IL Rt. 3. Colony is outside of Wetland E fill area.
14	Wetland F	~5-10 plants adjacent to industrial property.	Impacted by interchange with relocated IL Rt. 3; impacts addressed in IL Rt. 3 DEIS.
15	Wetland N	<5 plants in mowed field.	No direct impact. Adjacent to relocated I-70.
16	Wetland X	~185 plants at the perimeter of shallow depression.	No direct impact. Located about 1 km south and west of relocated I-70.
17	Wetland Y	~211 plants in 45 m x 10 m area. Colony in small depression.	No direct impact. Located about 1 km south and west of relocated I-70.
18	Cultivated field	~1,000-2,000 plants.	No direct impact. About 1 km south and west of relocated I-70.
19	Wetland W	>10,000 plants in 30-50 m x 400-500 m wet meadow area, with 25-50% cover.	No direct impact. Located about 1 km south of relocated I-70.
20	Wetland AA	~9 plants in wet meadow	No direct impact. Located adjacent to proposed wetland compensation area, 1/2 km south of I-55.
21	Wetland BB	<5 plants in wet meadow.	No direct impact. Located adjacent to proposed wetland compensation area, 1/2 km south of I-55.
22	N/A	>100,000 plants	No direct impact. Located east of IL Rt. 203 on landfill property at Horseshoe Lake.



# LEGEND

- — STUDY CORRIDOR
- LINE D (PREFERRED ALIGNMENT)
- EXISTING ROUTE 3

Location Map

Exhibit 1

Environmental Impact Statement Illinois Route 3 Madison and St. Clair Counties, Illinois

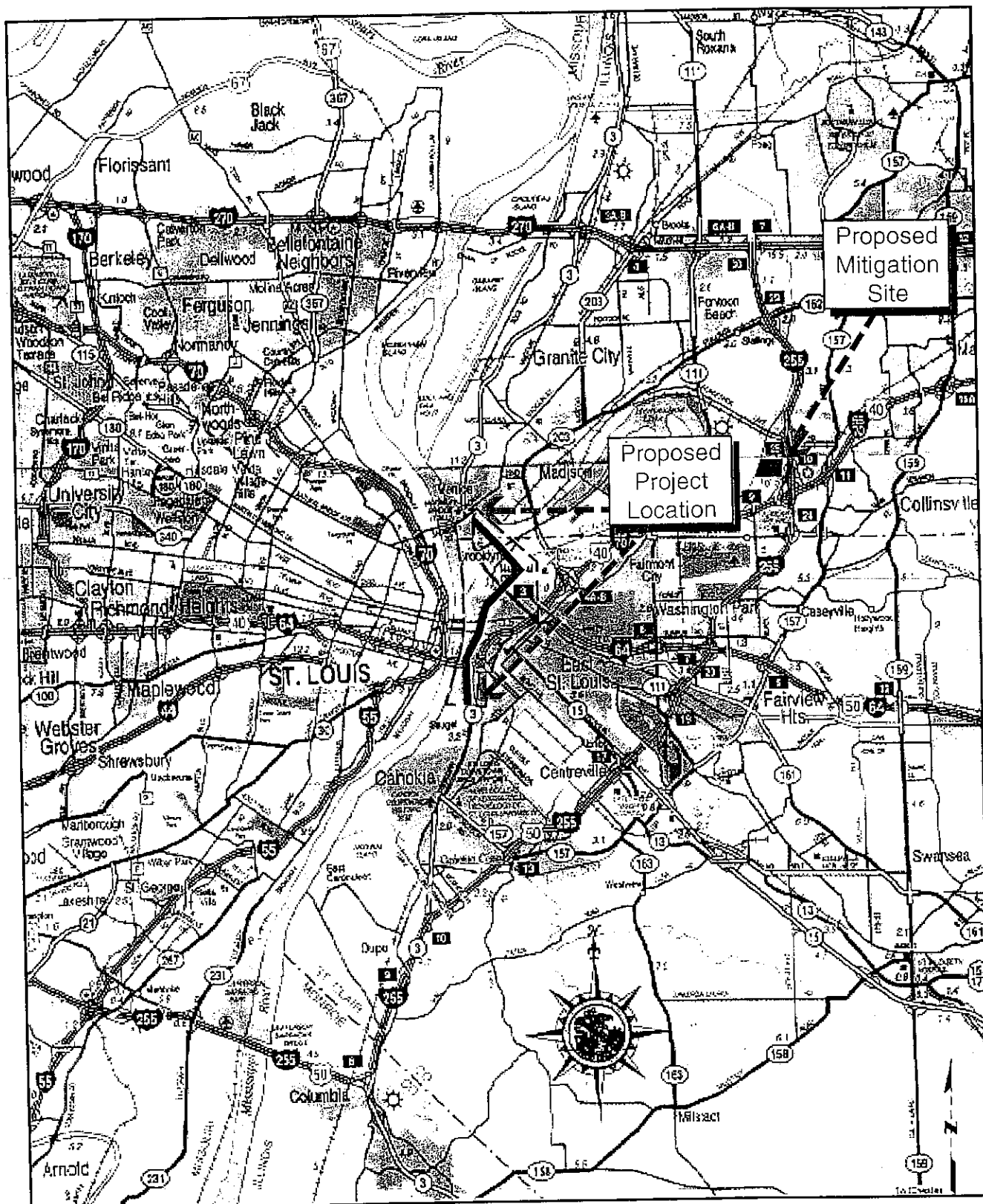
### LEGEND

- — STUDY CORRIDOR  
 ——— LINE D (PREFERRED ALIGNMENT)

Biological Resources - Rookeries

Exhibit 9

Environmental Impact Statement Illinois Route 3 Madison and St. Clair Counties, Illinois



#### LEGEND

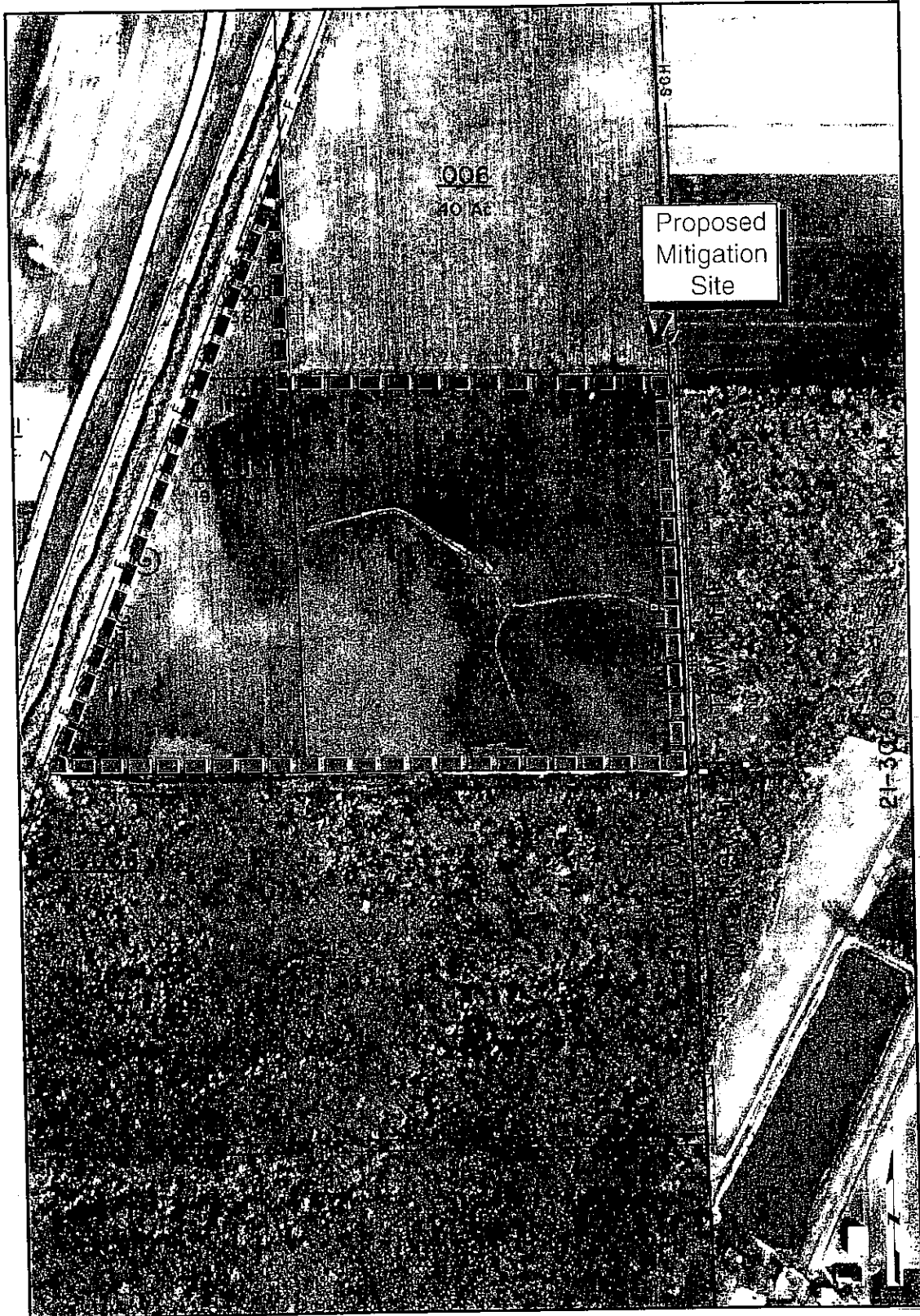
- — STUDY CORRIDOR
- LINE D (PREFERRED ALIGNMENT)

Location Map

Wetland Mitigation Site

Exhibit 15





Source: Madison County Plat Map , Monks Mound, Illinois

## Proposed Mitigation Site Map Exhibit 16

Environmental Impact Statement Illinois Route 3 Madison and St. Clair Counties, Illinois